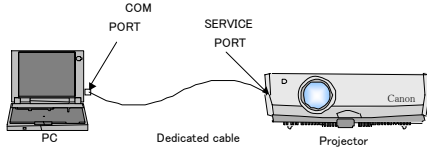


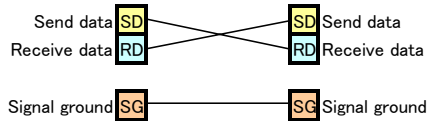
## 1. Connection

Connect the serial port (RS-232C connector) on the computer and the service port on the projector.  
Connect the computer and projector in a direct 1:1 connection.

If the number of pins or format of the connectors do not match, conversion adapters are required.



Item	Specification
Connection system	PC: Directly connected to projector (1:1)
Connecting signal line	3-line connection: SD, RD and SG
Connecting cable	9-pin RS-232C cable (crossover)



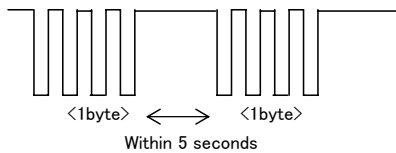
※ Only the 3 signals lines of SD, RD and SG are used in the SX800.

## 2. Communication Format

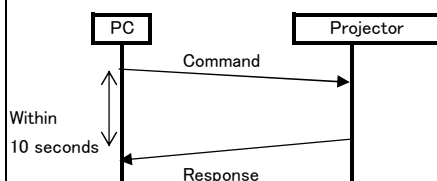
Item	Specification
Communication Method	RS-232-C start-stop synchronization, semi-duplex communication
Transmission Speed	19200 bps
Character Length	8 bits
Stop Bit	2 bits
Parity	None
Flow Control	None

Item	Specification
No. of bytes	Variable length (up to 256 bytes including delimiter)
Delimiters	CR, LF, CR+LF or null (00h) In this summary, CR is expressed as <CR>, LF as <LF>, CR+LF as <CR>+<LF> and null as <00>.
Message codes	ASCII code (typical characters: 20h to 7Fh) No differentiation is made in recognition between lower-case and upper-case letters (case-insensitive). <CR> is 0Dh, <LF> is 0Ah, <CR>+<LF> is 0Dh0Ah, and <00> is 00h.
Protocol	No protocol
Flow control	None
Error control	None
Break signal	Not supported

Timeouts

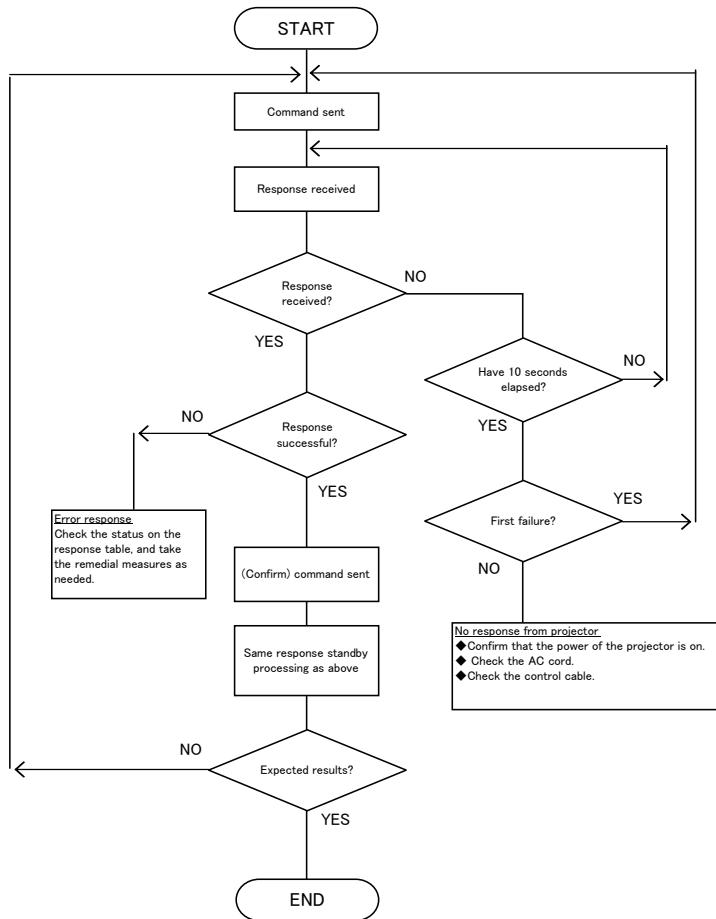


Between command and response: 10 seconds



After sending one command, the next command must not be sent without waiting for the response to the first command. Otherwise, an error will result.

### 3. Control Flowchart



#### Notes

- When sending commands in succession, wait until a response is received from the first command before sending the next command.
- The command timeout is 10 seconds. If no response is returned within 10 seconds after a command is sent, the command or response may not have reached the destination. Check the power supply of the device and the communication cable, and resend the command.

## 4. Power Control

### 4. 1 [Power Control] Commands

Commands for controlling the power or for acquiring the power mode

Contact the service center for command details or information about all the commands.

PC⇒PRJ

Command Type		ASCII notation	Binary Notation
Power	Power ON	POWER ON<CR>	50h 4Fh 57h 45h 52h 20h 4Fh 4Eh 0Dh
	Power OFF	POWER OFF<CR>	50h 4Fh 57h 45h 52h 20h 4Fh 46h 46h 0Dh
Get power mode		GET POWER<CR>	47h 45h 54h 20h 50h 4Fh 57h 45h 52h 0Dh

### 4. 2 [Power Control] Responses

Responses to commands for power control or for acquiring the power mode

PRJ⇒PC

Response Type		ASCII notation	Binary Notation
Power	Success	i:OK<CR>	69h 3Ah 4Fh 4Bh 0Dh
	Failure	<Refer to the Error List>	
Get power mode	OFF	g:POWER=OFF<CR>	67h 3Ah 50h 4Fh 57h 45h 52h 3Dh 4Fh 46h 46h 0Dh
	OFF→ON	g:POWER=OFF2ON<CR>	67h 3Ah 50h 4Fh 57h 45h 52h 3Dh 4Fh 46h 46h 32h 4Fh 4Eh 0Dh
	ON	g:POWER=ON<CR>	67h 3Ah 50h 4Fh 57h 45h 52h 3Dh 4Fh 4Eh 0Dh
	ON→PMM	g:POWER=ON2PMM<CR>	67h 3Ah 50h 4Fh 57h 45h 52h 3Dh 4Fh 4Eh 32h 50h 4Dh 4Dh 0Dh
	PMM	g:POWER=PMM<CR>	67h 3Ah 50h 4Fh 57h 45h 52h 3Dh 50h 4Dh 4Dh 0Dh
	PMM→ON	g:POWER=PMM2ON<CR>	67h 3Ah 50h 4Fh 57h 45h 52h 3Dh 50h 4Dh 4Dh 32h 4Fh 4Eh 0Dh
	ON→OFF	g:POWER=ON2OFF<CR>	67h 3Ah 50h 4Fh 57h 45h 52h 3Dh 4Fh 4Eh 32h 4Fh 46h 46h 0Dh
Failure	<Refer to the Error List>		

※ OFF indicates the standby mode, ON indicates that the projector is running, and PMM indicates the power management mode.

※ '→' indicates a transition to another mode.

## 5. Input Source Selection

### 5. 1 [Input Source Selection] Commands

Commands for switching the input source or for acquiring the input source selection value

PC⇒PRJ

Command Type		ASCII notation	Binary Notation
Input source	AnalogPC1	INPUT=A-RGB1<CR>	49h 4Eh 50h 55h 54h 3Dh 41h 2Dh 52h 47h 42h 31h 0Dh
	AnalogPC2	INPUT=A-RGB2<CR>	49h 4Eh 50h 55h 54h 3Dh 41h 2Dh 52h 47h 42h 32h 0Dh
	Component	INPUT=COMP<CR>	49h 4Eh 50h 55h 54h 3Dh 43h 4Fh 4Dh 50h 0Dh
	Video	INPUT=VIDEO<CR>	49h 4Eh 50h 55h 54h 3Dh 56h 49h 44h 45h 4Fh 0Dh
Get input source		GET INPUT<CR>	47h 45h 54h 20h 49h 4Eh 50h 55h 54h 0Dh

### 5. 2 [Input Source Selection] Responses

Responses to commands for input source selection or for acquiring the input source selection value

PRJ⇒PC

Response Type		ASCII notation	Binary Notation
Input source	Success	i:OK<CR>	69h 3Ah 4Fh 4Bh
	Failure	<Refer to the Error List>	
Get input source	AnalogPC1	g:INPUT=A-RGB1<CR>	67h 3Ah 49h 4Eh 50h 55h 54h 3Dh 41h 2Dh 52h 47h 42h 31h 0Dh
	AnalogPC2	g:INPUT=A-RGB2<CR>	67h 3Ah 49h 4Eh 50h 55h 54h 3Dh 41h 2Dh 52h 47h 42h 32h 0Dh
	Component	g:INPUT=COMP<CR>	67h 3Ah 49h 4Eh 50h 55h 54h 3Dh 43h 4Fh 4Dh 50h 0Dh
	Video	g:INPUT=VIDEO<CR>	67h 3Ah 49h 4Eh 50h 55h 54h 3Dh 56h 49h 44h 45h 4Fh 0Dh
	Failure	<Refer to the Error List>	

## 6. Image Mode Selection

### 6. 1 [Set Image Mode] Commands

Commands for switching the image mode or for acquiring the image mode setting value

PC⇒PRJ

Command Type		ASCII notation	Binary Notation
Image mode	STANDARD	IMAGE=STANDARD<CR>	49h 4Dh 41h 47h 45h 3Dh 53h 54h 41h 4Eh 44h 41h 52h 44h 0Dh
	PRESENTATION	IMAGE=PRESENTATION<CR>	49h 4Dh 41h 47h 45h 3Dh 50h 52h 45h 53h 45h 4Eh 54h 41h 54h 49h 4Fh 4Eh 0Dh
	SRGB	IMAGE=SRGB<CR>	49h 4Dh 41h 47h 45h 3Dh 53h 52h 47h 42h 0Dh
	MOVIE	IMAGE=MOVIE<CR>	49h 4Dh 41h 47h 45h 3Dh 4Dh 4Fh 56h 49h 45h 0Dh
Get image mode		GET IMAGE<CR>	47h 45h 54h 20h 49h 4Dh 41h 47h 45h 0Dh

### 6. 2 [Set Image Mode] Responses

Responses to commands for setting the image mode or for acquiring the image mode setting value

PRJ⇒PC

Response Type		ASCII notation	Binary Notation
Image mode	Success	i:OK<CR>	69h 3Ah 4Fh 4Bh 0Dh
	Failure	<Refer to the Error List>	
Get image mode	STANDARD	g:IMAGE=STANDARD<CR>	67h 3Ah 49h 4Dh 41h 47h 45h 3Dh 53h 54h 41h 4Eh 44h 41h 52h 44h 0Dh
	PRESENTATION	g:IMAGE=PRESENTATION<CR>	67h 3Ah 49h 4Dh 41h 47h 45h 3Dh 50h 52h 45h 53h 45h 4Eh 54h 41h 54h 49h 4Fh 4Eh 0Dh
	SRGB	g:IMAGE=SRGB<CR>	67h 3Ah 49h 4Dh 41h 47h 45h 3Dh 53h 52h 47h 42h 0Dh
	MOVIE	g:IMAGE=MOVIE<CR>	67h 3Ah 49h 4Dh 41h 47h 45h 3Dh 4Dh 4Fh 56h 49h 45h 0Dh

## 7. Brightness

### 7. 1 [Set Brightness] Commands

Commands for setting the brightness or for acquiring the brightness setting value

PC⇒PRJ

Command Type		ASCII notation	Binary Notation
Brightness	Numerical setting	BRI=<numerical value><CR>	42h 52h 49h 3Dh <numerical code> 0Dh
Get brightness		GET BRI<CR>	47h 45h 54h 20h 42h 52h 49h 0Dh

Example:

BRI=-10<CR>

42h 52h 49h 3Dh 2Dh 31h 30h 0Dh

### 7. 2 [Set Brightness] Responses

Responses to commands for setting the brightness or for acquiring the brightness setting value

PRJ⇒PC

Response Type		ASCII notation	Binary Notation
Brightness	Success	i:OK<CR>	69h 3Ah 4Fh 4Bh 0Dh
	Failure	<Refer to the Error List>	
Get brightness		g:BRI=<numerical value><CR>	67h 3Ah 42h 52h 49h 3Dh <numerical code> 0Dh

Example:

g:BRI=-20<CR>

67h 3Ah 42h 52h 49h 3Dh 2Dh 32h 30h 0Dh

## 8. Sharpness

### 8. 1 [Set Sharpness] Commands

Commands for setting the sharpness or for acquiring the sharpness setting value

PC⇒PRJ

Command Type		ASCII notation	Binary Notation
Sharpness	Setting value	SHARP=<numerical value><CR>	53h 48h 41h 52h 50h 3Dh <numerical code> 0Dh
Get sharpness		GET SHARP<CR>	47h 45h 54h 20h 53h 48h 41h 52h 50h 0Dh

Example:

SHARP=-4<CR>

53h 48h 41h 52h 50h 3Dh 2Dh 34h 0Dh

### 8. 2 [Set Sharpness] Response

Responses to commands for setting the sharpness or for acquiring the sharpness setting value

PRJ⇒PC

Response Type		ASCII notation	Binary Notation
Sharpness	Success	i:OK<CR>	69h 3Ah 4Fh 4Bh 0Dh
	Failure	<Refer to the Error List>	
Get sharpness		g:SHARP=<numerical value><CR>	67h 3Ah 53h 48h 41h 52h 50h 3Dh <numerical code> 0Dh

Example:

g:SHARP=-2<CR>

67h 3Ah 53h 48h 41h 52h 50h 3Dh 2Dh 32h 0Dh

## 9. Contrast

### 9. 1 [Set Contrast] Commands

Commands for setting the contrast or for acquiring the contrast setting value

PC⇒PRJ

Command Type		ASCII notation	Binary Notation
Contrast	Setting value	CONT=<numerical value><CR>	43h 4Fh 4Eh 54h 3Dh <numerical code> 0Dh
Get contrast		GET CONT<CR>	47h 45h 54h 20h 43h 4Fh 4Eh 54h 0Dh

Example:

CONT=-4<CR>

43h 4Fh 4Eh 54h 3Dh 2Dh 34h 0Dh

### 9. 2 [Set Contrast] Responses

Responses to commands for setting the contrast or for acquiring the contrast setting value

PRJ⇒PC

Response Type		ASCII notation	Binary Notation
Contrast	Success	i:OK<CR>	69h 3Ah 4Fh 4Bh 0Dh
	Failure	<Refer to the Error List>	
Get contrast		g:CONT=<numerical value><CR>	67h 3Ah 43h 4Fh 4Eh 54h 3Dh <numerical code> 0Dh

Example:

g:CONT=-2<CR>

67h 3Ah 43h 4Fh 4Eh 54h 3Dh 2Dh 32h 0Dh

## 10. Aspect

### 10. 1 [Aspect] Commands

Commands for switching the aspect ratio or for acquiring the aspect ratio value

PC⇒PRJ

Command Type		ASCII notation	Binary Notation
Aspect	Auto	ASPECT=AUTO<CR>	41h 53h 50h 45h 43h 54h 3Dh 41h 55h 54h 4Fh 0Dh
	4:3	ASPECT=4.3<CR>	41h 53h 50h 45h 43h 54h 3Dh 34h 3Ah 33h 0Dh
	16:9	ASPECT=16.9<CR>	41h 53h 50h 45h 43h 54h 3Dh 31h 36h 3Ah 39h 0Dh
	Zoom	ASPECT=ZOOM<CR>	41h 53h 50h 45h 43h 54h 3Dh 5Ah 4Fh 4Fh 4Dh 0Dh
	True	ASPECT=TRUE<CR>	41h 53h 50h 45h 43h 54h 3Dh 54h 52h 55h 45h 0Dh
Get aspect value		GET ASPECT<CR>	47h 45h 54h 20h 41h 53h 50h 45h 43h 54h 0Dh

※ Available settings vary depending on the input source and input signal format used.

### 10. 2 [Aspect] Responses

Responses to commands for setting the aspect ratio or for acquiring the aspect ratio value

PRJ⇒PC

Response Type		ASCII notation	Binary Notation
Aspect	Success	i:OK<CR>	69h 3Ah 4Fh 4Bh
	Failure	<Refer to the Error List>	
Get aspect value	Auto	g:ASPECT=AUTO<CR>	67h 3Ah 41h 53h 50h 45h 43h 54h 3Dh 41h 55h 54h 4Fh 0Dh
	4:3	g:ASPECT=4.3<CR>	67h 3Ah 41h 53h 50h 45h 43h 54h 3Dh 34h 3Ah 33h 0Dh
	16:9	g:ASPECT=16.9<CR>	67h 3Ah 41h 53h 50h 45h 43h 54h 3Dh 31h 36h 3Ah 39h 0Dh
	Zoom	g:ASPECT=ZOOM<CR>	67h 3Ah 41h 53h 50h 45h 43h 54h 3Dh 5Ah 4Fh 4Fh 4Dh 0Dh
	True	g:ASPECT=TRUE<CR>	67h 3Ah 41h 53h 50h 45h 43h 54h 3Dh 54h 52h 55h 45h 0Dh
	Failure	<Refer to the Error List>	

## 11. Lamp Mode

### 11. 1 [Lamp Mode] Commands

Commands for switching the lamp mode between silent and normal or for acquiring the lamp mode value

PC⇒PRJ

Command Type		ASCII notation	Binary Notation
Lamp mode	Normal	LAMP=NORMAL<CR>	4Ch 41h 4Dh 50h 3Dh 4Eh 4Fh 52h 4Dh 41h 4Ch 0Dh
	Silent	LAMP=SILENT<CR>	4Ch 41h 4Dh 50h 3Dh 53h 49h 4Ch 45h 4Eh 54h 0Dh
Get lamp mode		GET LAMP<CR>	47h 45h 54h 20h 4Ch 41h 4Dh 50h 0Dh

### 11. 2 [Lamp Mode] Responses

Responses to commands for setting the lamp mode or for acquiring the lamp mode value

PRJ⇒PC

Response Type		ASCII notation	Binary Notation
Lamp mode	Success	i:OK<CR>	69h 3Ah 4Fh 4Bh 0Dh
	Failure	<Refer to the Error List>	
Get lamp mode	Normal	g:LAMP=NORMAL<CR>	67h 3Ah 4Ch 41h 4Dh 50h 3Dh 4Eh 4Fh 52h 4Dh 41h 4Ch 0Dh
	Silent	g:LAMP=SILENT<CR>	67h 3Ah 4Ch 41h 4Dh 50h 3Dh 53h 49h 4Ch 45h 4Eh 54h 0Dh

## 12. Blank Function

### 12. 1 [Blank Function] Commands

Commands for executing the blank function or for acquiring the blank function value

PC⇒PRJ

Command Type		ASCII notation	Binary Notation
Blank	Execute	BLANK=ON<CR>	42h 4Ch 41h 4Eh 4Bh 3Dh 4Fh 4Eh 0Dh
	Cancel	BLANK=OFF<CR>	42h 4Ch 41h 4Eh 4Bh 3Dh 4Fh 46h 46h 0Dh
Get blank		GET BLANK<CR>	47h 45h 54h 20h 42h 4Ch 41h 4Eh 4Bh 0Dh

### 12. 2 [Execute Blank] Responses

Responses to commands for executing the blank function or for acquiring the blank function value

PRJ⇒PC

Response Type		ASCII notation	Binary Notation
Blank	Success	i:OK<CR>	69h 3Ah 4Fh 4Bh 0Dh
	Failure	<Refer to the Error List>	
Get blank	ON	g:BLANK=ON<CR>	67h 3Ah 42h 4Ch 41h 4Eh 4Bh 3Dh 4Fh 4Eh 0Dh
	OFF	g:BLANK=OFF<CR>	67h 3Ah 42h 4Ch 41h 4Eh 4Bh 3Dh 4Fh 46h 46h 0Dh

### 13. Error List

Errors are indicated by the following character strings when the response to a sent command is a failure response. <CR>, <LF>, <CR>+<LF> or <00> is added to the end of the error string. The delimiters are the same as the ones for the sent commands.

PRJ⇒PC

Error String	Error Details	Corrective action
e:0001 BAD_SEQUENCE 65h 3Ah 30h 30h 30h 31h 20h 42h 41h 44h 5Fh 53h 45h 51h 55h 45h 4Eh 43h 45h	Communication sequence error.	Wait until a response is received before sending the next command.
e:0002 INVALID_COMMAND 65h 3Ah 30h 30h 30h 32h 20h 49h 4Eh 56h 41h 4Ch 49h 44h 5Fh 43h 4Fh 4Dh 4Dh 41h 4Eh 44h	Invalid (undefined) command.	Send a valid command.
e:0004 INVALID_FORMAT 65h 3Ah 30h 30h 30h 34h 20h 49h 4Eh 56h 41h 4Ch 49h 44h 5Fh 46h 4Fh 52h 4Dh 41h 54h	Invalid command format.	Send the command in the valid format.
e:0005 NOT_POWER_SUPPLIED 65h 3Ah 30h 30h 30h 35h 20h 4Eh 4Fh 54h 5Fh 50h 4Fh 57h 45h 52h 5Fh 53h 55h 50h 50h 4Ch 49h 45h 44h	The projector's power is off.	Turn on the power using the POWER ON command.
i:BUSY (POWER)<CR> 69h 3Ah 42h 55h 53h 59h 20h 28h 50h 4Fh 57h 45h 52h 29h 0Dh	The projector is switching power modes.	Wait until the power mode is ON, OFF or PMM.
e:000A INVALID_PARAMETER 65h 3Ah 30h 30h 30h 41h 20h 49h 4Eh 56h 41h 4Ch 49h 44h 5Fh 50h 41h 52h 41h 4Dh 45h 54h 45h 52h	The parameter (type) is invalid (undefined). Includes cases when the number of parameters is incorrect.	Use the correct parameters.
e:000B JOB_TIMEOUT 65h 3Ah 30h 30h 30h 42h 20h 4Ah 4Fh 42h 5Fh 54h 49h 4Dh 45h 4Fh 55h 54h	Internal processing in the projector has timed out.	Resend the command.
i:BUSY (FOCUS) 69h 3Ah 42h 55h 53h 59h 20h 28h 46h 4Fh 43h 55h 53h 29h	The focus lens is being driven.	Wait until the projector has finished driving the focus lens.
i:BUSY (ZOOM) 69h 3Ah 42h 55h 53h 59h 20h 28h 5Ah 4Fh 4Fh 4Dh 29h	The zoom lens is being driven.	Wait until the projector has finished driving the zoom lens.
i:BUSY (LOGO_CAPTURE) 69h 3Ah 42h 55h 53h 59h 20h 28h 4Ch 4Fh 47h 4Fh 5Fh 43h 41h 50h 54h 55h 52h 45h 29h	User image registration is in progress.	Wait until user image registration is complete.
i:BUSY (IMAGE) 69h 3Ah 42h 55h 53h 59h 20h 28h 49h 41h 4Dh 47h 45h 29h	Image mode switching is in progress.	Wait until the projector has switched the image mode.
i:BUSY (NOW_SETTING) 69h 3Ah 42h 55h 53h 59h 20h 28h 4Eh 4Fh 57h 5Fh 53h 45h 54h 54h 49h 4Eh 47h 29h	Signal setting (detection) in progress.	Wait until the processing is completed.
i:BUSY 69h 3Ah 42h 55h 53h 59h	Internal processing in the projector is in progress.	Wait until the current processing is complete.
e:1006 NOW_BLANK 65h 3Ah 31h 30h 30h 36h 20h 4Eh 4Fh 57h 5Fh 42h 4Ch 41h 4Eh 4Bh	Cannot execute command since blanking operation is in progress.	Resend the command after canceling the blanking operation.
e:1009 NOW_FREEZE 65h 3Ah 31h 30h 30h 39h 20h 4Eh 4Fh 57h 5Fh 46h 52h 45h 45h 5Ah 45h	Cannot execute command since freeze operation is in progress.	Resend the command after canceling the freeze operation.
e:100A NOW_D.ZOOM 65h 3Ah 31h 30h 30h 41h 20h 4Eh 4Fh 57h 5Fh 44h 2Eh 5Ah 4Fh 4Fh 4Dh	Cannot execute command since D. zooming is in progress.	Resend the command after canceling D. zooming.
e:100B NOW_SPECIAL_MENU 65h 3Ah 31h 30h 30h 42h 20h 4Eh 4Fh 57h 5Fh 53h 50h 45h 43h 49h 41h 4Ch 5Fh 4Dh 45h 4Eh 55h	Cannot execute command in current menu mode.	Resend the command after exiting the current menu mode.
e:F001 SYSTEM (UNKNOWN) 65h 3Ah 46h 30h 30h 31h 20h 53h 59h 53h 54h 45h 4Dh 20h 28h 55h 4Eh 4Bh 4Eh 4Fh 57h 4Eh 29h	An internal error has occurred.	Resend the command.



e:E0XX COMMUNICATION_ERROR	A communication protocol violation has occurred in the projector.	Resend the command.
65h 3Ah 45h 30h <numerical code> 20h 43h 4Fh 4Dh 4Dh 55h 4Eh 49h 43h 41h 54h 49h 4Fh 4Eh 5Fh 45h 52h 52h 4Fh 52h		
e:1008 INVALID_SCREEN_ASPECT	Cannot execute command under current screen aspect ratio setting.	Change the screen aspect ratio setting.
65h 3Ah 31h 30h 30h 38h 20h 49h 4Eh 56h 41h 4Ch 49h 44h 5Fh 53h 43h 52h 45h 45h 4Eh 5Fh 41h 53h 50h 45h 43h 54h		
e:200X INVALID_SOURCE (***)	Cannot execute command with current input source. Current input source is indicated in parentheses.	Change the input source.
65h 3Ah 32h 30h 30h <numerical code> 20h 49h 4Eh 56h 41h 4Ch 49h 44h 5Fh 53h 4Fh 55h 52h 43h 45h 20h 28h *** 29h		
e:2010 NO_SIGNAL	No input signal.	Supply the input signal.
65h 3Ah 32h 30h 31h 30h 20h 4Eh 4Fh 5Fh 53h 49h 47h 4Eh 41h 4Ch		
e:0801 INVALID_VALUE	Numerical parameters are invalid or outside the specified range.	Set the parameters in the correct range.
65h 3Ah 30h 38h 30h 31h 20h 49h 4Eh 56h 41h 4Ch 49h 44h 5Fh 56h 41h 4Ch 55h 45h		
e:0802 INVALID_VALUE	Numerical parameters are invalid or outside the specified range.	Set the parameters in the correct range.
65h 3Ah 30h 38h 30h 32h 20h 49h 4Eh 56h 41h 4Ch 49h 44h 5Fh 56h 41h 4Ch 55h 45h		
e:1002 NO_LOGO_CAPTURED	Cannot execute processing since user image is not registered.	Register the user image.
65h 3Ah 31h 30h 30h 32h 20h 4Eh 4Fh 5Fh 4Ch 4Fh 47h 4Fh 5Fh 43h 41h 50h 54h 55h 52h 45h 44h		
e:1003 IP_NOT_AVAILABLE	IP conversion is not possible.	Switch to the correct input signal.
65h 3Ah 31h 30h 30h 33h 20h 49h 50h 5Fh 4Eh 4Fh 54h 5Fh 41h 56h 41h 49h 4Ch 41h 42h 4Ch 45h		
e:1004 POWER_MANAGEMENT_OFF	DPON=ON cannot be set when PMM=OFF.	Use a setting other than PMM=OFF.
65h 3Ah 31h 30h 30h 34h 20h 50h 4Fh 57h 45h 52h 5Fh 4Dh 41h 4Eh 41h 47h 45h 4Dh 45h 4Eh 54h 5Fh 4Fh 46h 46h		
e:1005 DIRECT_POWER_ON	PMM=OFF cannot be set when DPON=ON.	Use the DPON=OFF setting.
65h 3Ah 31h 30h 30h 35h 20h 44h 49h 52h 45h 43h 54h 5Fh 50h 4Fh 57h 45h 52h 5Fh 4Fh 4Eh		
e:203X INVALID_RESOLUTION(***)	Invalid input signal resolution. Additional information is indicated in parentheses. ■ OVER_PANEL_RES: input signal resolution exceeds panel resolution.	Switch to an input signal with the correct resolution.
65h 3Ah 32h 30h 33h <numerical code> 20h 49h 4Eh 56h 41h 4Ch 49h 44h 5Fh 52h 45h 53h 4Fh 4Ch 55h 54h 49h 4Fh 4Eh 28h *** 29h		
i:INPUT_NOT_FOUND	Input was not switched since there is no input signal at AUTOSETEXE=INPUT.	Notification of status only; no particular measures needed.
69h 3Ah 49h 4Eh 50h 55h 54h 5Fh 4Eh 4Fh 54h 5Fh 46h 4Fh 55h 4Eh 44h		

※ Error codes are 4-digit hexadecimal strings. X represents any character from 0 to 9 or from A to F.

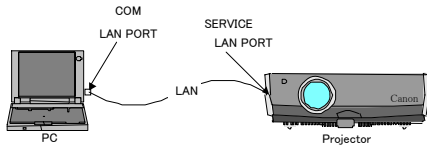
※ Items with lower numbers have a higher priority.

(Even when multiple errors have occurred, the error with the highest rank is returned. However, errors of the same item number are ranked with the same priority.)

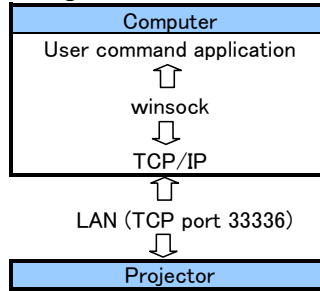
## Appendix: User Command Application for Network (for both SX80 and WUX10)

### ■ Description

- A LAN is used for transparent communication with the projector.
- The TCP/IP protocol (port 33336) is used between the projector and PC, and data is sent and received transparently.
- The Windows socket library can be used to create the application for controlling the projector from the PC. (Windows environment)



### Configuration of environment



### Connection conditions

Item	Specification
Connection system	LAN connection
Connecting cable	LAN cable (straight or crossover)

### Projector information required to execute user commands

Item	Specification
IP address	Can be changed.
TCP port no.	33336 (fixed)

### ■ Socket execution steps at client side

#### ① Initialization

#### ② Generation of socket descriptor

#### ③ Designation of IP address and TCP port number, and connection with projector side

#### ④ Data transmission and reception

#### ⑤ Socket close (descriptor release)

※Steps ① to ⑤ above correspond to the sample code numbers below.

■ Sample code

- User command application (ucmdapp.cpp)
- "ws2\_32.lib" must be added when building.

```
#include "stdafx.h"
#include "winsock2.h"

void msg_printf( char* buf, int bytes );
int _tmain( int argc, _TCHAR* argv[] )
{
    WSADATA      WSADATA;
    SOCKET        Sock;
    SOCKADDR_IN  SockAddr;
    char          aServerIPAddr[] = "192.168.254.254";
    char          aUserCmd_PowerON[] = "POWER ON\r\n";
    char          aRcvBuf[256];
    int           Port = 33336;
    int           Bytes;

    ① WSASStartup( MAKEWORD( 2, 2 ), &WSADATA );

    ② Sock = socket( PF_INET, SOCK_STREAM, 0 );

    ③ SockAddr.sin_family = PF_INET;
    SockAddr.sin_port = htons( Port );
    SockAddr.sin_addr.s_addr = inet_addr( aServerIPAddr );
    connect( Sock, (struct sockaddr *)&SockAddr, sizeof( SockAddr ) );

    ④ Bytes = send( Sock, aUserCmd_PowerON, (int)strlen( aUserCmd_PowerON ), 0 );
    msg_printf( aUserCmd_PowerON, Bytes );

    Bytes = recv( Sock, aRcvBuf, sizeof( aRcvBuf ), 0 );
    msg_printf( aRcvBuf, Bytes );

    ⑤ closesocket( Sock );
    return 0;
}

void msg_printf( char* buf, int bytes )
{
    int i;

    printf( " >> [ " );
    for( i=0; i<bytes; i++){
        if( buf[i] == '\n' )    printf( "\r\n" );
        else if( buf[i] == '\r' ) printf( "\r\r" );
        else if( buf[i] == '\0' ) printf( "\r\0" );
        else                   printf( "%c", buf[i] );
    }
    printf( "]\r\n" );
}
```